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CONTROL, AND THE USE OF STATISTICS
IN THE OTTOMAN EMPIRE**

**Fatma Muge Gocek
and M. Sukru Hanioglu**

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WESTERN KNOWLEDGE, IMPERIAL CONTROL,
AND THE USE OF STATISTICS IN THE OTTOMAN EMPIRE

Fatma Müge Göçek
University of Michigan
Sociology Department
Ann Arbor, MI 48109

M. Şükrü Haniöglu
Princeton University
Near Eastern Studies Dept.
Princeton, NJ 08544

In the fall of 1885, when Samuel Sullivan Cox, the U.S. Representative to the court of the Ottoman sultan Abdülhamid II (1876-1909), had his first audience with the sultan, one of the topics he discussed was a relatively new social measurement, i.e. the census. Mr. Cox, implicitly associating the American census with progress, made the following suggestion to the Ottoman sultan (Cox 1893: 37):

"...In reply to the [sultan's] curiosity as to the miraculous growth of our own land in population and resources, I told him that the only way in which he could possibly understand our advancement would be to take the salient points of our Census reports, and especially the Tenth Census (1880), have them suitably translated, and apply them to his own land".

The census had indeed become a measure of progress in Western Europe and the United States. Mr. Cox, who had been the chairman of the Census Committee of the House of Representatives before coming to the Ottoman Empire, enthusiastically provided detailed information about the U.S. census to the sultan. After his audience, Mr. Cox sent to the United States for a complete set of the census reports and presented these to the sultan at his next audience in the spring of 1886. The fourteen volumes of the census,¹ filled with "ponderous statistics", were taken from the U.S. legation to the sultan's palace by an old porter, thus leaving us with an interesting engraving marking this occasion (SEE FIGURE I).² While presenting the census material, Mr. Cox pointed out to the sultan that "the Census returns gave in statistical, tabular and picturesque form, the grand results of our American policy and civilization". The portrayal of the census as a measurement of the social and economic progress instigated by the state was also a recent Western development.

During his subsequent audience in the winter of 1887, Mr. Cox reported (1893: 43) the reactions of the sultan to the U.S. census he had been presented with. The sultan, upon examining the U.S. census in its entirety, had concluded that "with such data for administrative policies, the [United States] could not be other than prosperous". It is noteworthy that the sultan's reaction and Mr. Cox's presentation both emphasize the policy significance of the census, its effect on prosperity and civilization. Mr. Cox also related that the sultan asked him detailed questions on the execution of the U.S. census and told him that his Grand Vizier was organizing a commission to undertake such a census in the Imperial Domains. This information led Mr. Cox to conclude that (1893: 44) "probably Turkey may, if peace prevail, have a census of their own". What makes Mr. Cox's remark

¹ The 1880 census was particularly large, encompassing twenty-two volumes plus a compendium. There was one major volume for each of population, manufacture, agriculture, and vital statistics, and new volumes on the industrial and economic growth of the nation (Anderson 1988: 101-2).

² We would like to thank Nilüfer İsvan and Irvin Schick for drawing our attention to this engraving.

interesting is that he was unaware that the Ottoman state had been conducting censuses "in the Western mode", since 1831; there were three Ottoman censuses undertaken in 1831-8, 1844, 1866-73. In addition, the returns from the census sultan Abdülhamid himself had ordered earlier in his reign in 1881-2 were being sent to the capital as they spoke.

Indeed, like Mr. Cox, very few people know about the adoption and use of statistics outside of Western Europe and the United States. The literature on the emergence and application of statistics focuses almost exclusively on the West where statistics originated. Even though studies on statistics in England, France, Germany and the United States demonstrate possible interaction patterns between state and statistics, we do not know if these patterns hold in non-Western contexts. The lengthy exchange between Mr. Cox and the sultan indicates that the state may indeed play a significant role in this adoption pattern.

In this article, we extend the analysis of the interaction between state and statistics in one non-Western context, the Ottoman Empire. We argue that the Ottoman state adopted Western statistical knowledge to develop a modern state administration, and, at the same time, to control the emerging civil society. We first contextualize our argument by studying the interaction among state, civil society, and statistics in the West and in the Ottoman Empire; the 1895 Ottoman social survey we then introduce demonstrates our argument.

State, Civil Society, and Statistics in the West What led to the emergence of statistics in Western Europe? Scholars emphasize the Enlightenment in answering this question and argue that the emphasis the Enlightenment placed on the individual rather than on social groups or estates led to the development of the science of statistics. The participation of the individual in society and the state became problematized. The eighteenth century witnessed the debate of the concept of legal equality of individuals before the state; discussions of political equality followed in the nineteenth century (Göçek 1991).³ This emphasis on individual's rights led to the emergence of the concept of "civil society" as these individuals started to exercise their rights in the social system. As these individuals further embedded their rights in the political structure, the "state" was redefined: the legitimacy of the state started to be based on the participation of these individuals. As individuals rather than social groups or estates thus became the unit of reference, both civil society and the state attempted to study, in depth, the conditions under which the individuals lived.

³ The concept of economic equality became prevalent in the twentieth century.

Yet how was the individual, as the new unit of analysis, affected by this new joint state-civil society interest? Michel Foucault's work captures the ambivalence of this social transformation. Legal and political rights emancipated individuals and aided them in forming the civil society and the state; yet the state, by gaining access to each individual, also began to control them to an unprecedented degree. As Foucault pointed out (1977: 169):

"Historians of ideas usually attribute the dream of a perfect society to the philosophers and jurists of the eighteenth century; but there was also a military dream of society; its fundamental reference was not to the state of nature, but to the meticulously subordinated cog of a machine, not to the primal social contract, but to permanent coercions, not to fundamental rights, but to indefinitely progressive forms of training, not to the general will, but to automatic docility".

There was thus a dark side to the Enlightenment, one that brought the individual came under the control of the state in all spheres of social activity. As Foucault specifically expressed in another context (1977: 136), the individual became reduced to a "docile body that may be subjected, used, transformed, and improved by the state". Knowledge and power directly implied one another in this transformation; they ruled and regulated and could not be divorced from one another (Lemert and Gillan 1982: 34). Knowledge for power brought along the power for knowledge; as the state studied the individuals and learned more about them, it could control them more; this control in turn enabled them to gather even more information on them.

If we extend this reasoning to the emergence of statistics, we can argue that statistics⁴ developed as a scientific tool for the state to gather knowledge about each and single individual and exercise power over them. Statistics included various social dimensions from the outstart. The "scientific"⁵ quality of statistics was assumed to have the neutrality and precision of the natural sciences; the power dimension of statistics was thus originally obfuscated. By cognitively linking data, the assembled knowledge of statistics also created the illusion of unity in the social environment (Desrosieres 1990: 214). In addition, statistics also "equalized" people by counting each one as individuals, not as members of estates "who possessed a maze of privileges, given by history, identified by nature, and inherited through birth" (Porter 1986: 25). Statistics thus created the illusion of equality as well. As this imagined unity and equality was transformed from the local to the national level by the end of the

⁴ We use the definition of statistics as "the systematic collection and analysis of quantitative information about a population (Anderson 1988: 5)".

⁵ The development of science during the Enlightenment had also given people the optimistic belief that the "general laws" of human development and behavior could be similarly captured and improved (Pernot and Woolf 1984: 84).

nineteenth century, it legitimated the social practices of the state. One can thus argue that the state reified itself through the statistical knowledge it produced. This formulation has one problem, however: it gives no agency to civil society in this transformation. We only find civil society in resisting state control by withholding information from it -- often for the fear of taxation or military conscription.

Yet civil society played a significant role in demarcating the social practice of statistics. Even the etymology of the word "statistics" captures the tension between state and civil society in defining the term. In England, where civil society specified the parameters of social measurement, statistics was defined, by the Scottish John Sinclair, as "an inquiry into the state of a country", to ascertain "the quantum of happiness enjoyed by its inhabitants, and the means of its future improvement" (Woolf 1989: 590). Particularly during the formative 1770-1840 period of statistics, statistical societies founded by the urban elite, the universities, and popular culture contested the state's attempts to monopolize statistics as a social measurement of the population. In England and the United States, civil society, represented by the educated elites, determined the parameters of statistical practice. In England, statistical societies acted as pressure groups on the state; in the United States, the academic elite fervently criticized the state practice of statistical data collection.

The emergence of the statistical movement in England is often tied to the response of civil society as led by urban middle class elites to the environmental problems of industrialization and urbanization. The earliest application of statistics in the West occurred in 1662 as John Graunt demonstrated quantitative social laws in mortality rates (Jahoda et al. 1971: 100-6; Kargon 1963: 340). The emergence of a new kind of municipal consciousness within civil society, then recognized in national politics in the redistribution of parliamentary seats, contributed to the process (Goldman 1983: 589-90). Statistics was also used to control the moral effects of the physical environment and the possible revolt of the working classes (Cullen 1975: 135-6). David Davies's measure of the budgets of working classes in 1787, and the reports of private charitable organizations which dealt mostly with poverty were in such a vein.

The statistical societies were the most significant organizations within civil society that defined the boundaries of the statistical practice. They focused exclusively on numbers and "mere abstraction" to avoid the appearance of introducing the "foul Daemon of disorder" (Cullen 1975: 146). The members of the Statistical Society of London, which was founded in 1834, vowed to exclude all opinions from their proceedings and aimed only to gather the facts (Hilts 1978: 21). They aspired to illustrate the conditions and prospects of society. Of

the many statistical societies formed in England during the 1833-8 period, only Manchester and London societies have remained. An inquiry into these two Societies (Elesh 1972) demonstrates how the state eventually coopted these organizations of the civil society. As governmental institutions developed to gather statistics on problems of social importance, they seized both the functions and the laborpower of the statistical societies. The inability of the membership to agree on common goals, the diversion of resources to other interests, and the members' limited aim of social reform also contributed to the wane of these societies.

In the United States, civil society negotiated the use of statistics by coupling of taxation and representation through a census (Davis 1972: 70). Population became a measure of political power and tax capacity as Congress representation was apportioned on the basis of census returns (Anderson 1988: 10-3). Political participation was thus literally defined through taking part in the state activity of census taking.⁶ The state's mode of information collection through the census was criticized by the academics as the representatives of civil society. These individuals did work on the census even though there was a constant tension between qualified people striving for the scientific quality demanded by the academic world and the political appointees of the congress (Anderson 1988: 99-100). Popular interest in statistics was also stimulated through newspapers, almanacs, statistical and commercial reviews. It was the civil society that was responsible for the formation of the American Statistical Association in 1839 "to secure authentic information upon every department of human pursuit and condition" (Davis 1972: 74).

This practice of statistics under the guidance of civil society contrasted sharply with the German and French practice, where the state emerged as an important agent in using statistics to form policies that further controlled the population. In Germany, it was the state that identified the scope of statistics as "a science dealing with the facts of the state" in a systematic manner (Shaw and Miles 1979: 31). The state controlled the nature of statistical analysis and rarely shared with civil society the information it gathered. In France, the state aimed to catalog, through statistics, all the variations in the social environment to construct the one and indivisible France, i.e., the France as it was imagined by the Revolution (Woolf 1989: 598-600). The Napoleonic era added the policy dimension to this state practice; Napoleon himself often used statistical information to shape French state policies. The post-Napoleonic practice of statistics by the state captured the shift in the purpose of

⁶ In addition, as the trajectories established over a number of censuses revealed a high pattern of population growth, people assumed the size of a population to be a source and index of its wealth (Anderson 1988: 21).

statistical inquiry (Pernot and Woolf 1984: 125) "away from history towards policy making, from an encyclopedic search for the science of man and explanatory laws to a more pragmatic belief in factual information as a response to conjunctural crisis and, more general, as the basis of effective administration". Hence it was after Napoleon that statistics acquired its modern definition as systematic and period social data collection as a quantitative basis for policy-making.

As the spheres of social activity controlled by the French state increased, the scope of the statistical information gathered expanded with it. The Interior Ministry survey, for example, covered more than two hundred headings in "reviewing the collective forces of the nation". They included agricultural products, the demographic and medical state of the population, the activities of factories and trade, subsistances, police measures for the preservation of morality, public opinion, births and deaths, major commercial lawsuits, food prices, and even a register of Roman remains. The topics covered grew over the course of the nineteenth century to cover, consecutively, education, public works, mendicancy and vagabondage, epidemics and vaccines, and execution of laws and the attitude of people toward government (Pernot and Woolf 1984: 12-3, 20, 128-9). This rigorous employment of statistics by the French state is particularly significant for our analysis because the Ottoman Empire often looked to France as the model for Western progress.

State, Civil Society, and Statistics in the Ottoman Empire We need to place the Ottoman adoption of statistics within the historical context of eighteenth and nineteenth century Ottoman social transformation (Göçek 1988). This period marked a pronounced shift in Ottoman history, in both the units of political control and taxation, from estates to individuals. Internally, the control over sources of revenue were fiercely contested between the Ottoman sultan and the notables who collected these revenues for him. The sultan therefore attempted to replace these notables with salaried officials -- thus shifting the unit of political control from the notables to individuals. Externally, the frequent wars the Ottoman empire started to wage both on its eastern and western fronts created an immediate demand for cash to finance them. The former practice of bestowing usufructuary rights on land in return for taxes in kind was therefore replaced by long term leases for currency.⁷

⁷ The changes in military technology from cavalry units to drilled battalions also contributed to this shift; the usufructuary rights were originally given in return for supplying a certain number of mounted cavalry for each war.

The individual rather than the household thus started to become the unit of taxation.⁸ Hence the shift, in both cases, to the individual as the unit of control and taxation required the Ottoman state to take stock according to this new criterion.

Statistics became pertinent to the Ottoman needs in this juncture as a useful Western science. The escalating success of the West in both warfare and commerce at their expense had alerted the Ottomans to the significance of science and technology in creating this Western success. The set Ottoman policy became the adoption of Western science and technology to bring the empire to the military and commercial standards of the West (Hanioglu 1985: 10-6). In this context, statistics was another technological tool that the Ottoman state⁹ utilized to improve the empire.

What were the consequences of this targeted adoption of Western science and technology? The scientific transformations in the West had emerged through the interaction of the newly articulated demands of the state and civil society. Locating civil society in the Ottoman empire was difficult, however. The Ottoman state, which was structured around the power and authority of the sultan, however, impeded the development of a civil society. The sultan did not want to negotiate or share power with civil society. He controlled all the revenues and the rights, and attempted to provide for all the possible needs of his subjects without sharing revenues or rights with them. Yet the decision of the Ottoman state to import Western science and technology ironically led to the emergence of an Ottoman civil society led by a Western-educated elite -- a development the sultan tried constantly to avoid.

These elites were thoroughly trained in the Western mode and imagined an Ottoman state and society antithetical to the one in which they lived. In order to accomplish their imagined social system, they aimed to take over state administration. They wanted to replace the sultan's loyal officials with people from their ranks who were well-versed in modern scientific learning.¹⁰ In practice, their agenda was to displace "loyalty", the underlying tenet of the Ottoman state envisioned by the sultan, with "regulations" that would extend beyond the

⁸ The poll tax on the non-Muslims also shifted from a communal base to an individual one.

⁹ The Ottoman state turned to France, the country with which it enjoyed the longest peaceful relations in Western Europe, for expertise on the application of these statistics. Also, the fact that France had evolved the use of statistics around the structure of the state suited the Ottoman aims particularly well.

¹⁰ See, for example, Münif, "Darülfünun Dersleri", Mecmua-i Fünun, I/2(1279 H):332.

individual reigns of the sultans. In the various treatises on the European civilization, they emphasized the need for an administration based on scientific thinking. They stated, for example, that:¹¹

"Those who govern in this century must be well aware of various matters, especially government administration and international relations. In our time the administration of government affairs can not be left in the hands of ignorant men as they may have been previously..."

Their issue of administrative reorganization thus brought with it a disdain about the traditional "ignorant" administration of the empire. As in Europe, this new Ottoman administrative elite started to accept science and technology as the "measure of men" (Adas 1989), judging other societies and their own history through a measure of civilization based upon the degree of mastery of the environment -- an environment they needed to measure.

The Ottoman sultan employed these "Westernized" intellectuals and foreigners¹² to improve his empire. His contradictory aspirations brought about his downfall, however. The sultan desired to be in total control of the state, but also aspired to govern efficiently with the aid of a modern state administration.¹³ The new Westernized elite he employed to form such a modern state administration started to challenge his control by assuming rights and responsibilities on their own. As in Europe, they accepted science and technology as the measures of men and society; they used science and technology to literally "measure" men.

The detailed manner in which statistical data was collected demonstrates the extent to which the Ottoman state attempted to control society. In 1879, the sultan ordered¹⁴ the establishment of sub-provincial statistical offices to collect daily records. According to his decree, the local statistical information was to be sent to a special commission in every province and, after its examination, was to be passed on to the Ministry of Commerce. Then, the information was to be shared among the various ministries: the Ministry of Commerce

¹¹ This quote is from "Avrupa Medeniyeti ve Ümrani Hakkında Risale", İstanbul University Library Turkish Manuscripts, No. 6623, leafs 3-4, 6. See also Mustafa Sami, Avrupa Risalesi, İstanbul 1256H, pp. 26, 35-6, and Avrupa'nın Ahvaline Dair Risale: Asar-ı Rıfat Paşa, İstanbul 1275H, pp. 10-1.

¹² He originally hired a French expert, M. Bolland, to investigate the census system (Karpas 1978: 330). Rather than creating an entirely new system of measurement, the expert told him to retain the old system which suited the Ottoman needs well.

¹³ The sultan tried to balance the newly appointed officials with his loyal bureaucrats by putting the less trustworthy former under the command of the more reliable latter. This move, however, only served to make the new officials more revolutionary than ever -- thus effectively creating the seed of a civil society that opposed and brought him down in 1909.

¹⁴ For the full text of the decree, see "İstatistik İdarelerine dair Nizamnamedir", Düstur, First Series, V. IV: 670-2.

was to get the information on population, post offices, prisoners, and the condition of the municipalities. The Ministry of Finance was to receive the information on property, exported and imported goods, and the budgets of the provinces; the Ministry of Commerce and Agriculture was to utilize the data on industry and agriculture, conditions of forests, and navigational affairs. The Ministry of Justice was to be given the data on legal trials, and the Ministry of Education was to receive the information on schools, faculty, and students. After examining the received data, each ministry was ordered to prepare annually a statistical list for each province.

How was the Ottoman state able to execute such a carefully crafted statistical data collection and distribution system? The strong Ottoman administrative tradition that had engaged in data collection for centuries was the reason behind this capability. Periodic census and revenue surveys¹⁵ of the Ottoman realms started probably as early as the fourteenth century, dating to the reign of Bayezid I (1389-1402). The surveys were conducted to collect information for taxation or military conscription (Howard 1986: 214). The specific data collection techniques mainly evolved through the Ottoman conquests;¹⁶ the state assessed the taxable resources of conquered lands through surveys (Cvetkova 1983: 133-4; İnalçık 1954: 105, 110). Also, each sultan, upon his accession, assessed the resources of the empire and reconfirmed the land tenure rights based on the results of these surveys.¹⁷ Such surveys were usually conducted every couple of decades (Barkan 1970: 163; 1940: 23, 32-4).

Three types of registers were compiled from these surveys. First was an enumeration of all tax payers, organized in the administrative divisions of the empire into towns and villages (mufassal). The second register comprised the summary registers with the number of taxpayers and the value of the taxes officially expected from each administrative unit (icmal). The third register comprised the day-to-day records of the revenues and expenditures of administrative units (ruzname) (Howard 1986: 217; Faroqhi 1979: 23; Shaw 1960: 3; Lewis 1951:

¹⁵ The roots of this practice of undertaking periodic population and land surveys was practiced, before the Ottomans, by the Arabs in Egypt and Spain, Seljukids in Iran, and Ilkhanids in India (Barkan 1940: 28).

¹⁶ Conscriptors were often the first civilian officials to arrive in the newly conquered lands to register the persons and possessions of every household in the area. They were supervised by a judge (kadı) and assisted by clerks who had been trained in the art of writing and had acquired a familiarity with numbers. These conscriptors also made on-site examination of previous registers whereby all residents had to appear and present documents proving their status. The results of these surveys, compiled in the form of a register, were submitted to the sultan.

¹⁷ All commitments in land tenure rights were void upon the death of a sultan; they had to be renewed by the next one in line.

146-8; İnalçık 1954: 112). In mid-sixteenth century, a separate bureau evolved to undertake and utilize these surveys; it was entitled the Ottoman Imperial Registry.¹⁸ This registry then grew in size from a bureau of three scribes to a department of at least fifteen in late sixteenth century (Howard 1986: 229). In the seventeenth century, transformations in the Ottoman taxation and social control systems necessitated new data collection techniques. "Western" statistics was thus introduced, initially in the form of censuses.

These Ottoman censuses demonstrate the gradual development of statistics in the Western mode, and the subsequent institutionalization as state organizations are formed to process data and utilize them in forming state policies. The first instance of the adoption of the "Western" conception of social measurement can be traced to the reign of the reformer sultan Mahmud II (1808-39). Having abolished the Janissary Corps in 1826, the sultan had to rapidly create a new army and bureaucracy. The administrative reorganization of the Ottoman state thus generated the need for a census. The first Ottoman census was devised as early as 1829, and conducted between 1831-8 (Shaw 1978: 325-7; Karpat 1983: 208-9, 214). The census takers were recruited from among religious officials and scholars¹⁹ to inspire confidence among the populace (Karpat 1985: 9, 20). Yet, as they were only given general outlines for data collection, the results were not properly systematized.

The efforts to introduce age as a new category for data collection, for example, produced many problems. Some census takers properly collected data in the three age categories of "below 16", "16-40", and "above 40", while others used the age brackets "1-12" or "1-14", "12-40" or "14-40" (Karpat 1985: 18-20). Still some other minimalist census takers found "young" and "old" sufficient as age categories. Fearing that the misinterpretation of age categories might produce deleterious effects on the entire census, the sultan himself personally ordered that each official should conduct the census according to the traditional Ottoman data collection methods. Most census takers therefore used the categories of religion ("Muslims", "non-Muslims"), productivity ("strong", "children", "retired", "incapable of work") or, in the case of the non-Muslims, wealth

¹⁸ The spectrum of the scribal tradition is evident in a mid-sixteenth century scribal salary register which listed 31 scribes and 14 apprentices in the Imperial Treasury, 19 scribes in the Imperial Council, and 8 scribes in the Bureau of Rescripts (Howard 1986: 217).

¹⁹ Approximately 85 such officials assisted by clerks was sent out where each one was assigned a number of administrative districts.

("good", "average", "low", or "incapable of work".) They also devised new categories such as "suitable to the purposes of the census" or "not".²⁰

Subsequent institutionalization occurred as the 1838 census returns were sent to the capital: a population office, titled the Office for the Supervision of Registers, was set up and population registers were designed to organize the data (Karpas 1985: 19-20, 28-9). After this census, the Ottoman census takers also started to become professionalized.²¹ The posts of population inspectors, officials, and registrars were created; these were appointed to the Ottoman administrative districts, with orders to record births, deaths, and to periodically compile population lists.²² The Ottoman state thus started to gain access to information on individuals from the village level all the way up to the center.

The 1844 census was conducted under the direction of a military official, Rıza Pasha who was the minister of war; its explicit purpose was to assess the size of the population available for conscription (Karpas 1985: 21, 31). After the 1866 census about which little is known, the 1881 census was the first one that was thoroughly systematized. This systematization was partially made possible through the unification of the census and registration system into a single code of "Regulation for Population Registers".²³ The codification was

²⁰ The census was indeed used for the conscription of Muslims into service in 1838; the middle "16-40" age range was targeted for military conscription. The taxation pattern of the non-Muslims was changed, with this census, from communal to an individual basis, as well (Karpas 1985: 9).

²¹ The prerequisites of becoming a census official were made specific in 1900 (Shaw 1978: 335-6) whereby district officials, for example, had to be middle school graduates, or had to have accumulated five years' experience in civil service, or had to have served three years as assistant in the lower ranks of the census department. As the rank of the official increased, the demands for qualifications in terms of education or experience increased with it. Yet, all census officials had to be Ottoman subjects, and literate in reading and writing Ottoman Turkish; they also had to perform well on the examinations of census procedures that were administered on a regular basis. The directors of the census departments also sent a number of their staff to England and France to study modern census techniques (Shaw 1978: 333). These officials probably attended the international statistical congresses that occurred between 1853 and 1876 as well. The first international congress was in Brussels, followed by Paris in 1855, Vienna 1857, London 1860, Berlin 1863, Florence 1867, The Hague 1869, St. Petersburg 1872, and Budapest in 1876. Political conflict over adapting the resolutions of the congress by the German state led to its dissolution after 1876 (Westergaard 1932: 172).

²² In 1853, a further change occurred in their job description as they were also required to register migrations, and to collect and send the information at least several times a year.

²³ The regulations comprised sixty articles (Karpas 1985: 32), forty-eight on the organization of the register system and twelve on the census itself. The registration information included name, nickname, father's name, address, age, religion, profession or occupation, electoral status, physical disabilities, and civil status. Women were also registered; they were given the provision that two witnesses would testify for them if they did not want to appear in front of the census taker in person.

coupled with increased state control as each registered individual was given an identity card. Without this card, the individual could not engage in buying, selling, or inheriting property, be accepted in an occupation or profession, obtain travel documents, or conduct any official business. A person who neither had a card nor an excuse acceptable to the court was punished by a fine and a jail term that extended from twenty-four hours to as long as thirty days. The 1881 census thus clearly demonstrated how the Ottoman state, through utilizing the census, was able to penetrate and enforce its control over the entire society. The formation of the concept of an "identity card" and the fines and jail terms for not acquiring one also prove the validity of Foucault's concerns of total state control over the individual.

The institutionalization which followed the 1881 census was the formation of the Statistical Council of the Sublime Porte by the sultan to oversee the state's statistical activities and to recommend policy measures.²⁴ Mr. Cox's description of the U.S. Census Committee of the House of Representatives might have inspired him into establishing this council. If that were the case, one can argue that the sultan personally formed various political structures such as these councils which, in Western contexts, would have developed from the participation of civil society in the state affairs. The sultan thus attempted to coopt such political participation in the Ottoman context by setting up these councils on his own -- thus attempting to stunt the formation of an Ottoman civil society.

Census figures became a contested domain as various ethnic groups started to claim sovereignty based on these figures, or on alternate ones they themselves had collected through religious communal organizations. Political manipulation of population data thus commenced in mid-nineteenth century. At about the same time, the interest of the Ottoman state in statistics proliferated beyond the censuses to include other forms of social measurement (Karpas 1985: 30-1). Statistics on foreign trade were first compiled by the Ottoman state in 1878. In 1881, the sultan charged the War Ministry with the duty of enumerating the Muslim males, and the Ministry of the Interior for counting up the non-Muslims. The first socio-economic censuses of the empire was prepared by French-educated Ottoman statisticians in 1897 upon the order of sultan Abdülhamid II.²⁵ In summary, the

²⁴ For the text specifying the regulations governing the Council, see "Bab-1 Ali İstatistik Encümeni Nizamnamesi", Mütemmim, pp. 160-2.

²⁵ The reference to this document in the İstanbul University Library Archives is: Nezaret-i Umur-u Ticaret ve Nafia İstatistik-i Umumi İdaresi, Devlet-i Aliyye-i Osmaniyyenin Bin Üç Yüz On Üç Senesine Mahsus İstatistik-i Umumisidir, Turkish Manuscripts, No. 9184/6.

Ottoman pattern of development of statistics comprised the interaction between the needs of the state, census taking, and subsequent institutionalization to process the information collected; the scope of the census increased as the state demands for information expanded.

Case-study of the 1895 Ottoman Social Survey²⁶ The first statistical survey of the Ottoman Empire demonstrates the interaction between the state demands and the subsequent data collection. This survey was presented to sultan Abdülhamid in 1895 by Mehmed Behiç, an official²⁷ from the Office for the Supervision of Registers. The survey also had a novel aspect: it is the first Ottoman survey to make use of the graphic and cartographic modes of presentation. The thorough 240-page survey contained detailed information on geographical and physical conditions of the empire, population (age, mortality, fertility, marriage, divorce, migration), welfare, health and hospitals, crime, law and justice, education (private, civil, military), libraries, antiquities, museum collections, agricultural products, mining and forestry, state revenues and expenditures, balance of payments, imports and exports, stamps and coinage, salt, silk, tobacco production, banking, taxation, public services and utilities, and postal services and transportation. Most of the information is in the form of tables although there are a few graphs and cartography.

Mehmed Behiç introduced this statistical survey by giving a history of the science of statistics. He informed the sultan that "all European states adopted this science as a fundamental principle of administration and commerce, and elevated it to the level of a special science". Hence the emphasis was once more placed on the contributions of statistics to state administration, the purpose for which it was most frequently employed in the Ottoman Empire. Mehmed Behiç then continued to point out that he had utilized, for the first time, the "graphic and cartographic" mode of presentation of the statistical data. The graphical representation of statistical data was popularized in mid-nineteenth century; the first state albums of statistical graphs were prepared in France in 1878 by the State Statistical Bureau under the direction of Monsieur Cheysson (Funkhouser 1937: 330). These albums, or other publications by Western European states, seem to have guided the work of Mehmed

²⁶ The manuscript is located at the İstanbul University Library Turkish Manuscripts, No. 9075.

²⁷ This official later became the General Director of Statistics in 1908 and served for six years until 1914. It is noteworthy that the director between 1903-7 was one "Rober Bey", Mr. Robert, apparently an American. The others were in 1892 Nuri Bey, between 1893-4 Fethi Bey, 1895-6 Fethi Franko, and 1897-1902 Mıgırdıç Sınabyan Efendi (Karpas 1978: 250-1).

Behiç who acknowledged that he organized the statistics "using, as much as possible, the information [he] could obtain from books concerning statistics".

But why was there a need for this new mode of presentation? Mehmed Behiç summarized its significance to the sultan in terms of its visual and mnemonic properties; he stated that:

"As it is known by His Excellency, the Shadow of God, the two most important aspects of the "graphic and cartographic" manner are to present the correlation among various things in a clear manner, and to thus be able to keep these correlations in one's memory with ease. For the viewpoint of the interests of the state, these aspects are its most important assets".

Hence summing up all the pertinent information for administrative concerns of the state was once more the point that was stressed the most. Mehmed Behiç then proceeded to give information on the present population of the Sublime State (i.e. the Ottoman Empire), its occupations, religions, education, finance, agriculture, and commerce.

Indeed, the manuscript contains information on the Ottoman Empire to a level of detail not found anywhere else.²⁸ Included in the manuscript are, for example, a map of the Ottoman Empire indicating its population density (FIGURE II), mortality and fertility tables for 1895 (FIGURE III), and age pyramids of the empire by provinces (FIGURE IV). These figures provide novel information on the empire. One can tell, by analyzing the age pyramids, for example, that there is a lot of underreporting of women, especially older women. In addition, the pyramids indicate that the birth rates in the Balkan provinces were affected by wars, that the Black Sea provinces have rapidly growing populations, and that the Eastern provinces may have experienced a famine several decades earlier.

In conclusion, we studied the adoption and use of statistics by the Ottoman state in the nineteenth century, and argued that the Ottoman state adopted "Western" statistical knowledge to develop a modern state administration and to control the emerging civil society. This dynamics in employing the statistical mode was indeed different from that of Western Europe and the United States. More studies of the adoption and use of statistics in non-Western contexts are necessary to test the empirical boundaries of this conclusion.

²⁸ We are still searching in the archives to locate the actual data on which these tables are based.

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FIGURE I.



HAMAL CARRYING UNITED STATES CENSUS TO YILDIZ.

FIGURE IV.

نماذج کشتی‌های دریایی در عهد ساسانیان و ساسانیان در عهد ساسانیان

